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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/724,899

12/02/2003

Thomas Niemann

4086-0185P

2441

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01/26/2006

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EXAMINER

WYATT, KEVIN S

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H/A

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/724,899 | Applicant(s) NIEMANN ET AL. | |
| | Examiner Kevin Wyatt | Art Unit 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9,11, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hofmann (U.S. Patent No. 5,677,529).

Regarding claim 1, Hofmann shows in Fig. 1 a sensor device for determining the intensity of incident light depending on the direction of the light (i.e., a device for receiving light beams) comprising, a) at least one orientation characteristic element (LS1, i.e., lens segment), through which the light (beams, i.e., S1-S4) striking the sensor device, depending on the angle of incidence can pass, b) at least one light-sensitive sensor element (light sensors, i.e., W1 and W2), which detects the light that passed through the orientation characteristic element, c) and at least one absorption element (reflectors, i.e., R1-R4), which absorbs the light striking the sensor device and/or the light having passed through the orientation characteristic element in such a way that the light power striking the light sensitive sensor element does not exceed a predetermined

value, wherein the absorption element is formed as a reflecting surface (the light penetrating the orientation characteristic element represents the predetermined value (less than 100%) and the remaining light reflected from reflectors R1-R4 is less than a predetermined value due to the light absorbed by reflectors R1-R4)(col. 4, lines 19-29).

Regarding claims 2-3, Hofmann shows in Fig. 1 a device for receiving light beams wherein a) the reflecting surface (i.e., R1-R4) is arranged in such a way that the light having passed through the orientation characteristic element can be reflected by the reflecting surface, wherein a portion of the reflected light can be detected by the sensor element (col. 4, lines 58-64), b) the reflecting surface has a shape (i.e., non-planar) in order to achieve a desired absorption of the light striking the reflecting surface (col. 3, lines 14-19).

Regarding claims 4-6, Hofmann discloses a device for receiving light beams wherein a) the sensor device has a housing, and wherein the housing has at least a partial cover (i.e., a housing having at least one window), b) the orientation characteristic element is located on or in the cover (i.e., lens segments being disposed in said at least one window), c) the reflecting surface is located inside the housing (i.e., said lens segments surrounding said light sensors and said at least one horizontal reflector) on a partial surface of the housing (claim 13, lines 2,6 and 16-17).

Regarding claims 7-9 and 11, Hoffman discloses a device for receiving light beams wherein a) the orientation characteristic element is an optic that is molded to the cover (LS1, i.e., segments), through which the light striking the sensor device is at least partially diverted to reflecting surface b) the molded optic is a Fresnel lens (i.e., lens

segments are Fresnel lenses), c) the sensor element is an infrared-sensitive sensor element, and d) the sensor element detects light in the infrared region (col. 4, lines 30-35, claim 1, lines 17-26, and claims 3 and 2).

Regarding claim 15, Hoffmann discloses a light sensor (i.e., a device for receiving light beams) comprising; a housing (i.e., housing having at least one window), an orientation characteristic element (i.e., lens segments disposed in said at least one window) for enabling a predetermined amount of light radiation to pass there through, the orientation characteristic element being provided on the housing, and a reflecting surface (i.e., a left horizontal reflector and a right horizontal reflector) for receiving the predetermined amount of light radiation passed through the orientation characteristic element, the reflecting surface directing at least a portion of the predetermined amount of light towards a sensor element, which detects at least a portion of the predetermined amount of light, wherein the reflecting surface absorbs a portion of the predetermined amount of light such that the portion of the predetermined amount of light directed towards the sensor element has a value being less than a predetermined threshold (the light penetrating the orientation characteristic element represents the predetermined value (less than 100%) and the remaining light reflected from reflectors R1-R4 is less than a predetermined value due to the light absorbed by reflectors R1-R4)(claim 1, lines 2, 6, and 9-16).

Regarding claim 16, Hofmann discloses a light sensor wherein a) the orientation characteristic element directs the predetermined amount of light radiation towards the reflecting surface, and b) at least a portion of the predetermined amount of light directed

towards the sensor element by the reflecting surface has a value being less than a predetermined threshold (claim 1, lines 6-8).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10,12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann (U.S. Patent No. 5,677,529) in view of West (U.S. Patent No. 5,957,375).

Regarding claims 10,12-14, Hofmann discloses the stated invention as claimed above. Hofmann does not disclose, a) a sensor element that detects light in the visible region and the infrared region b) a sensor device for a motor vehicle and c) a sensor device that provides an output to control a heating and cooling system. West discloses a) a sensor element (i.e., photodiodes 74 and 76 shown in Fig. 2) that detects light in the visible region and the infrared region b) a sensor device for a motor vehicle (i.e., dual zone sunload sensor (52) for sensing radiant energy entering a vehicle cabin) and c) a sensor device (i.e., Dual Sunload Sensor 52 shown in Fig. 1) that provides an output to control a heating and cooling system. It would have been obvious to one skilled in the art to provide photodiodes 74 and 76 and lens 72 to the device of Hofmann for the purpose of generating a voltage output upon absorption of sunlight (col. 3, lines 26-32, claim 7, lines 1-2, col. 3 lines 13-15).

Response to Arguments

6. Applicant's arguments filed on 9/06/2005 have been fully considered but they are not persuasive.

It is well known in the art that the surface of any material will not reflect 100% of the light incident on its surface. Reflectors R1-R4 are designed to reflect light in the infrared range. However they do not completely reflect the incident light off of its surface. Since there are no reflective materials that reflect 100% of the light incident on its surface, the remaining incident light is absorbed as energy by the material's surface. Therefore, the reflectors R1-R4 of Hoffmann do not reflect 100% of the light incident to its surface. The reflectors R1-R4 reflect less than 100% of the incident light and the surface of the reflecting material absorbs the remaining light.

Although Hoffmann does not explicitly teach that reflectors R1-R4 absorb a percentage of incident light. It is inherent that even materials having highly reflective properties will absorb at least a small percentage of the incident light and reflect the rest. Therefore, reflecting surfaces of R1-R4 will not reflect 100% of the light incident on its surface.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reflection of electromagnetic radiation: "Reflection of metals."

www.accessscience.com.

Metallic High-Reflection Coatings: Metallic High-Reflection Coatings (table),
pg. 5.25. www.mellesgriot.com.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

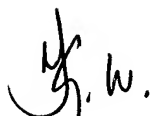
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Wyatt whose telephone number is (571)-272-5974. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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